

study placed upon it by President Brainerd. *Solidago* has been carefully elaborated as far as the New England species are concerned, but the treatment of species not represented in New England is deficient in several respects. Similarly, Dr. Greenman's treatment of eastern *Senecios* is satisfactory, but he has not met so well the difficulties encountered in a study of the southwestern forms. The number of *Asters* recognized has been enlarged from 54 to 59 with many additional varieties; but, even with these additions, there are forms worthy of recognition which are not referred to.

Other features of this interesting work might well be discussed and many specific criticisms made, but space forbids. Omitted species of great distinctness are readily called to mind. Many of these could have been obtained by the authors for examination upon request. The value of the work is lessened and the botanical world has lost because they have failed to make the request. Many synonyms used in recent works are not referred to. But putting these and other points open to unfavorable criticism aside, the writer feels that he has had before him for examination a work of great merit. He has been both pleasantly and agreeably surprised by it, and he feels sure that it will be a welcome addition to the working equipment of all American botanists who are not too strongly committed to the old order of things, — the order exemplified by the sixth edition.

KENNETH K. MACKENZIE.

## PROCEEDINGS OF THE CLUB

OCTOBER 13, 1908

The first meeting of the season, held at the Museum of Natural History, was called to order at 8:20 by Dr. Howe in the absence of other officers. Mr. George V. Nash was elected chairman. There were fourteen persons present. The minutes for May 27, 1908 were read and approved. The nominations of Mr. Michael Levine and Dr. Raymond H. Pond for membership in the Club were presented. The resignation of Miss Aurelia B. Crane to

take effect at the end of the present year was read and accepted. The resignation of Dr. C. Stuart Gager as secretary of the Club, occasioned by his removal to the University of Missouri, was read, and accepted with regret, after an expression of the value of his services to the Club. Dr. Pond was elected to membership.

The scientific program consisted of informal reports on field observations by members. Professor F. E. Lloyd was called upon first, and spoke of his recent experiences in Mexico. He exhibited field notes and photographs of cacti collected largely in northern Zacatecas, Mexico; in a restricted region, about sixty species are found. Four species of *Opuntia* are reported to be new; there were no species of *Echinocereus*. Owing to the fact that cacti in conservatories often exhibit very different behavior from that in their natural habitat, the importance of such field study of the group is to be emphasized.

Professor Lloyd then spoke on the bionomics of *Parthenium argentatum*, known in Mexico as guayule. From this plant a large amount of commercial rubber is obtained; the rubber occurs in masses in cells of the pith, medullary rays, and cortex, and is extracted by mechanical means. In addition to reproducing freely by seed, there is an interesting method of vegetative reproduction. The plant has, besides a tap-root system, long and slender horizontal roots near the surface, from which new shoots arise and produce new plants at a distance of a meter or more from the main plant. There may be from two to six of these shoots arising from one point, producing such a different habit that such plants may be easily distinguished from the seedlings with their single trunk. A piece of the stem of *Landolphia*, a tropical liana, was exhibited. In this case the latex coagulates in the canals and the rubber is extracted by mechanical means.

Mr. R. S. Williams spoke briefly of his five months' experience in Panama, particularly on the climatic and soil conditions as affecting vegetation.

Dr. E. B. Southwick exhibited a peculiar monstrosity of *Zea Mays*. Mr. Nash reported the discovery of the rare orchid, *Epipactis viridiflora*, at Letchworth Park.

Adjournment was at 10:05.

TRACY E. HAZEN,

Secretary pro tem.